Center Independent Research & Development: GSFC IRAD

A Compact Relativistic Electron Proton Telescope (CREPT) to Investigate Magnetospheric Electron Microbursts

Completed Technology Project (2012 - 2013)

Project Introduction

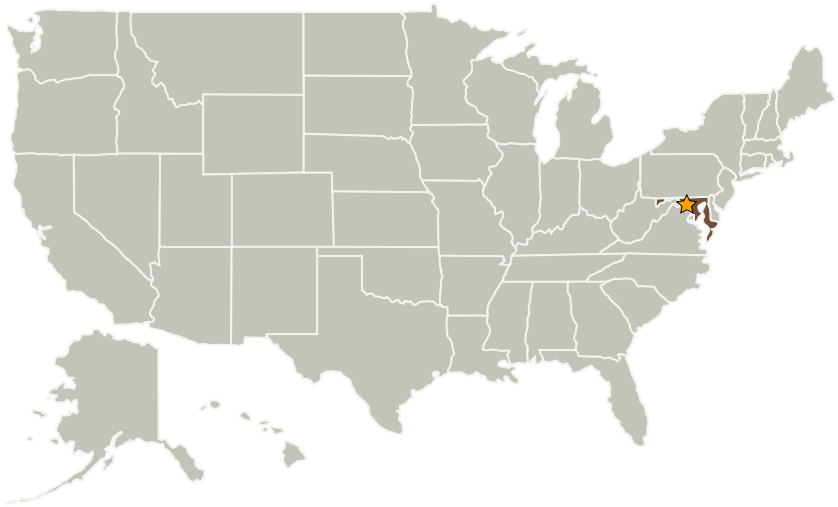
A Compact Relativistic Electron Proton Telescope (CREPT) to Investigate Magnetospheric Electron Microbursts is a project to build a solid-state (SSD) particle telescope to characterize magnetospheric charged particle fluxes with very high time resolution.

CREPT will measure electrons and protons in multiple differential energy channels.

Anticipated Benefits

Development of the CREPT benefits the Heliophysics division greatly by enhancing in-house capabilities for building energetic particle instrumentation. Solid state telescopes have applications ranging from planetary magnetospheres to interplanetary space.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

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Table of Contents

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Primary U.S. Work Locations
Maryland

Links

NTR 1
(no url provided)

Project Website:

http://sciences.gsfc.nasa.gov/sed/

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Manager:

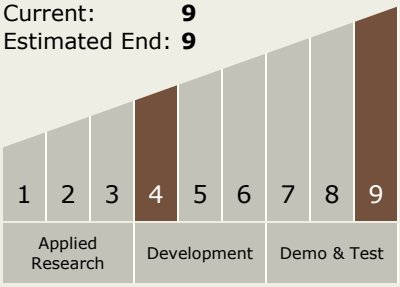
Nikolaos Paschalidis

Principal Investigator:

Shrikanth G Kanekal

Technology Maturity (TRL)

Start: **4**
Current: **9**
Estimated End: **9**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.3 In-Situ Instruments and Sensors
    - TX08.3.1 Field and Particle Detectors